### PROJECT DESCRIPTION

### GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT MD 22 AND MD 155 RELOCATED AND SIGNAL MODIFICATIONS AT MD 22 AND MD 136 IN HARFORD COUNTY, MARYLAND, MD 22 IS ASSUMED TO RUN IN AT AN EAST-WEST DIRECTION.

#### INTERSECTION OPERATION

1. MD 22 AND MD 155 RELOCATED

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 22 APPROACHES OPERATING CONCURRENTLY AND MD 155 RELOCATED AND PRIVATE DRIVEWAY OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR EASTBOUND MD 22 APPROACH.

2. MD 22 AND MD 136

THE INTERSECTION WILL OPERATE IN A NEMA SEVEN-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 22 APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR EASTBOUND AND WESTBOUND MD 22 APPROACHES AND SOUTHBOUND MD 136 APPROACH.

#### CONTROLLER REQUIREMENTS

1. MD 22 AND MD 155 RELOCATED

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE, AND ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

2. MD 22 AND MD 136

INSTALL A FULL-TRAFFIC-ACTUATED. EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE. AND THREE (3). FOUR-CHANNEL. TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

#### SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT. THE CONTRACTOR SHALL NOTIFY MR. ROBERT SYNDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION AT MD 22 AND MD 155 RELOCATED. THE CONTRACTOR IS TO PROVIDE MR. SYNDER WITH THE NEAREST STREET ADDRESS. ZIP CODE AND PHONE NUMBER.

### MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-30

STANDARD NO. MD-104.04-01 (SHOULDER WORK)

STANDARD NO. MD-104.02-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.03-01 (INTERSECTION FLAGGING OPERATION)

STANDARD NO. MD-104.81-02 (MOBILE SERVICE WORK)

### PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. DAVE MALKOWSKI DISTRICT ENGINEER

PHONE: (410) 321-3461

MR. RANDALL SCOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (410) 321-3514

MR. DAVE RAMSEY ASSISTANT DISTRICT ENGINEER - WAINTENANCE PHONE: (410) 321-3468

MR. JOE MCMAHON DISTRICT UTILITIES ENGINEER PHONE: (410) 321-3456

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630

## EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATAGORY CODE NO.	YTITHAUD	DESCRIPTION
900000	4 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
971017	2 EACH	EIGHT PHASE. FULL TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
973023	139 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		<ul> <li>1 EACH D-3(1) SIGN DUAL-FACED "LEVEL RD"</li> <li>(VARIABLE x 16 IN.) - MAST ARM MOUNT</li> </ul>
		- 1 EACH R10-12 SIGN (36 IN. × 42 IN.) - MAST ARM MOUNT
		- 3 EACH M95-1 (72 IN. x 24 IN.) SIGN- MAST ARM MOUNT
		- 1 EACH M95-1 (78 IN. x 24 IN.) SIGN- MAST ARM MOUNT
		- 1 EACH ASSOCIATED SHIELD ASSEMBLY (30 IN. x 51 IN.) "NORTH, MD 136, RIGHT ARROW"- POLE MOUNT
		<ul> <li>1 EACH ASSOCIATED SHIELD ASSEMBLY         (48 IN. x 75 IN.) "SOUTH, MD 136, LEFT ARROW"-         POLE MOUNT</li> </ul>
		- 2 EACH W3-3 (36 IN. × 36 IN.) SIGN WITH "NEW" PANEL (30 IN. × 30 IN.) - GROUND MOUNT

## EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINETS AT MD 136 AND MD 155. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME PROPERTY OF THE CONTRACTOR.

# EQUIPMENT LIST "B" CONTINUED

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
800000	1 EACH	REMOVAL AND DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT
800000	1 EACH	FURNISH AND INSTALL 27 FT, STEEL POLE WITH TWIN 50 FT./50 FT. MAST ARMS
800000	7 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN
800000	1 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT, LEAD-IN
800000	3 EACH	FURNISH AND INSTALL CONDUIT BEND IN EXISTING BASE
800000	3 EACH	FURNISH AND INSTALL 250 FT. VIDEO TRAFFIC DETECTION CABLE
800000	1 EACH	FURNISH AND INSTALL VIDEO TRAFFIC INTERFACE EQUIPMENT
800000	3 EACH	FURNISH AND INSTALL VIDEO DETECTION CAMERA

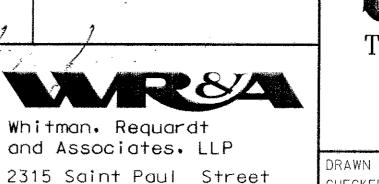
## EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

	ATEGORY ODE NO.	QUANTITY	DESCRIPTION
1	20500	LUMP SUM	MAINTENANCE OF TRAFFIC
1	20610	7 U.D.	ARROW PANEL
1	20620	200 S.F.	TEMPORARY TRAFFIC SIGNS
2	203030	10 C.Y.	TEST PIT EXCAVATION
5	585624	260 L.F.	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKINGS
-	301004	14 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
	301106	40 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORT 4 IN. x 6 IN.
	302501	600 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8	305011	40 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8	305160	100 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8	310010	90 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G THHN/THWN
8	311001	18 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8	313014	32 S.F.	INSTALL GROUND MOUNTED SIGN
	313015	107 S.F.	INSTALL OVERHEAD SIGN
	318051	1 EACH	FURNISH AND INSTALL 27 FT. STEEL POLE WITH TWIN 50 FT./70 FT. MAST ARMS
	322002	750 L.F.	FURNISH AND INSTALL 12 PAIR COMMUNICATION CABLE. JELLYFILLED (UNDERGROUND)
8	337001	8 EACH	FURNISH AND INSTALL GROUND ROD-  34 IN. DIAMETER X 10 FT. LENGTH
8	338003	2 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
8	360270	9 EACH	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8	360272	49 EACH	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8	860292	2 EACH	CUT. CLEAN. GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8	361104	1900 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR (ALUMINUM SHIELDED)
8	361107	220 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 A.W.G.)
8	361108	2900 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 A.W.G.)
8	861116	125 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 A.W.G.)
8	362101	3900 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING
8	62102	1700 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8	370160	700 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8	70161	230 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8	370162	175 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8	370163	405 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8	370165	225 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8	370166	350 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8	370168	300 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8	371202	2 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

TSP-4

SHEET NO.



Baltimore, Maryland 21218

(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION

> GENERAL INFORMATION SHEET MD 22 INTERSECTIONS

DRAWN BY: S.BLOSS SEE TITLE SHEET CHECKED BY: N.LEARY W 5.H.A. NO. HAIGS SITE CALE: NONE HARFORD COUNTY: T.I.M.S. NO. DATE: 9/10/01 OG MILE:

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